

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-215-1

CODE: (IS)

DATE: 02/14/2012

SUBJECT: Hydraulically Applied Mulch

Section 215, Mulching, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

907-215.01--Description. After the sentence of Subsection 215.01 on page 140, add the following.

Mulching may be accomplished by hydraulically applying the mulch in accordance with these specifications.

907-215.02--Materials. After the last paragraph of 215.02 on page 141, add the following.

907-215.02.1--Hydraulically Applied Mulch (Hydromulch). Fibers for hydromulch shall be produced from wood, straw, cellulose, natural fibers, or recycled fibers which are free of non-biodegradable substances. The fiber shall disperse into a uniform slurry when mixed with water. Fibers shall be colored green, or other approved contrasting color, and shall not stain concrete or other surfaces. The use of tacifiers or activators will be allowed.

Hydromulch shall be listed on the Department's "Approved Sources of Materials".

907-215.02.1.1--Wood Fiber Mulch. Wood fiber mulch shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed and fertilizer to form a homogeneous slurry. The fibers shall intertwine physically to form a strong moisture-holding mat on the ground surface and allow rainfall to percolate the underlying soil. The fiber material shall be heat processed so as to contain no germination or growth-inhibiting factors. The mulch shall be dyed an appropriate color to facilitate the application of material using non-toxic dye.

907-215.02.1.2--Cellulose Fiber Mulch. Cellulose fiber mulch consist of recycled paper stock products which are shredded into small pieces particular for application by hydraulic seeding equipment. It shall mix readily and uniformly under agitation with water and blend with grass seed and fertilizer to form a homogeneous slurry. When applied to the ground surface, the material shall form a strong moisture-holding mat, allow rainfall to percolate the underlying soil, and remain in place until the grass root system is established. The material shall contain no growth inhibiting characteristic or organisms. The mulch shall be dyed an appropriate color to facilitate the application of material using non-toxic dye.

907-215.02.1.3--Wood/Cellulose Fiber Mulch. Wood/cellulose fiber mix hydroseeding mulch shall consist of a combination of the above wood and cellulose fibers at a ratio recommended by the manufacturer of the products.

907-215.02.1.4--Straw Mulch. Straw mulch shall consist of a natural straw fiber. This material shall be a minimum 90% straw and essentially free from plastic materials or other non-bio degradable substances. The material shall be disperse into a uniform mulch slurry when mixed with water.

907-215.02.1.5--Tackifier. The tackifier will serve the purpose of an adhesive to form a bond between the soil, fiber, and seed particles. It will also allow the soil to retain moisture. The tackifier shall be of the organic or synthetic variety.

907-215.03--Construction Requirements. After Subsection 215.03.4 on page 142, add the following.

907-215.03.5--Hydromulch. Hydromulch shall be applied in accordance with the installation instructions and recommendations of the manufacturer. Hydromulch shall be uniformly applied at the manufacturer's recommended application rate. In no case shall the application rate be less than one (1) ton per acre.

907-215.03.5.1--Protection and Maintenance. The Contractor should maintain and protect mulched areas until the Release of Maintenance of the project. The Contractor should take every precaution to prevent unnecessary foot and vehicular traffic.

The Contractor should mow, remove or destroy any undesirable growth on all areas mulched as soon as any undesirable growth appears. This will prevent competition with the desired plants and to prevent reseeding of undesirable growth.

907-215.03.5.2--Hydro Equipment. The equipment for hydraulically applying seed and mulch shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix slurry of the specified amount of fiber, seed, and water. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with a set of hydraulic spray nozzles, which will provide even distribution of the slurry on the various areas to be seeded.

The mixture shall all be combined into the slurry tank for distribution of all ingredients in one operation as specified herein. The materials shall be combined in a manner recommended by the manufacturer. The slurry mixture shall be so regulated that the amounts and rates of application shall result in a uniform application of all materials at rates not less than the amounts specified. Using the color of the mulch as a guide, the equipment operator shall spray the prepared seedbed with a uniform visible coat. The slurry shall be applied in a sweeping motion, in an arched stream, so as to fall like rain, allowing the mulch to build upon each other until an even coat is achieved.

907-215.04--Method of Measurement. After the last paragraph of Subsection 215.04 on page 142, add the following.

Acceptable quantities of hydromulch will be measured by the ton.

The weight for measurement of hydromulch will be the dry weight of the packaged fibers used in the mixture. No separate payment will be made for water, additives, tackifier, or other liquids used in the mixture.

907-215.05--Basis of Payment. After the first paragraph of Subsection 215.05 on page 142, add the following.

Hydromulch, measured as prescribed above, will be paid for at the contract unit price per ton, which price shall be full compensation for all materials, equipment, labor, and incidentals necessary to complete the work.

Add the following to the pay item list on page 142.

907-215-B: Hydromulch - per ton